Quantitative Data Training
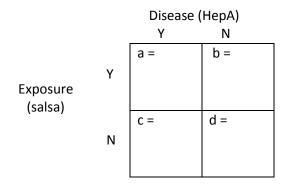
November 5, 2018

Chickasaw Nation Carl Albert Services Center

Activity 3

Consider a large outbreak of hepatitis A that occurred in Pennsylvania in 2003.Investigators found almost all of the case-patients had eaten at a particular restaurant during the 2–6 weeks (i.e., the typical incubation period for hepatitis A) before onset of illness. While the investigators were able to narrow down their hypotheses to the restaurant and were able to exclude the food preparers and servers as the source, they did not know which particular food may have been contaminated. The investigators asked the case-patients which restaurant foods they had eaten, but that only indicated which foods were popular. The investigators, therefore, also enrolled and interviewed a comparison or control group — a group of persons who had eaten at the restaurant during the same period but who did not get sick. Of 133 items on the restaurant's menu, the most striking difference between the case and control groups was in the proportion that ate salsa (94% of case-patients ate, compared with 39% of controls). Further investigation of the ingredients in the salsa implicated green onions as the source of infection.

1. Fill in the 2X2 table of exposure and disease for the example above.

Disease (HepA)

		Y	N
Exposure (salsa)	Y	a =	b =
	N	c =	d =

2. Calculate the risk ratio.

   Risk ratio = risk of disease in exposed group / risk of disease in comparison group

   = (a/a+b) / (c/c+d)

3. Interpret your findings.